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ABSTRACT

This paper describes an educational psychology class that helped develop self-reflection in preservice teachers by teaching them the dialectic process of analysis. Students explored the attitudes, beliefs, values, assumptions, and biases they as future teachers would bring with them to classroom interactions with students. As an ongoing assignment, students developed their own philosophies of education. Their first assignment was to create an ideal classroom based on their own experiences. As the semester progressed, students incorporated the various educational psychology concepts covered in class. Another instructional strategy involved providing a rationale for the instructor's assignments and behaviors wherever possible, thus modeling the reflective process sought by the dialectic. The instructor helped students develop dialectic thinking processes via a series of cases focused on classroom dilemmas. Students read and discussed cases in class and wrote detailed case analyses (which the instructor provided feedback on). It was through class discussions that the dialectic process was engaged as an instructional activity. Through repeated exposure in the classroom to this dialectic and self-reflective approach to the analysis of cases, class discussions, and revisions of philosophies, students were able to move along a continuum of beliefs. (Contains 21 references.) (SM)

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Teaching the Dialectic Process to Preservice Teachers in an Educational Psychology Class

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Introduction

This paper describes an educational psychology class in which an attempt was made to develop self-reflection in preservice teachers by teaching the students the dialectic process of analysis. Through course design and activities, it engaged students to explore what attitudes, beliefs, values, assumptions and biases they, as future teachers, would bring with them to classroom interactions with their students. The impetus for this study was a result of one of the authors having the opportunity to teach an undergraduate course in educational psychology while completing a graduate educational psychology program. He realized that his own background in political science, as well as his own understanding of his professional development in various social contexts, influenced the manner in which he interpreted and taught theories and principles of educational psychology. As he began to design the undergraduate course and the syllabus began to take shape, it became apparent that the information in the assigned text (Biehler & Snowman, 1997) seemed to have an artificial distance built into it. This was a distance that separated the personal background and development of the preservice teacher from their future role as a classroom teacher.

Most current educational psychology textbooks have two major goals. They present principles and theories of development, learning, motivation, assessment, etc., and they focus the reader on how to apply those principles and theories to their future careers as educators (e.g., see the prefaces of Ormrod, 2000; Slavin, 2000; Snowman, Biehler & Bonk 2000; and Woolfolk, 1998). The texts help preservice teachers to answer questions such as: How do students develop cognitively and how is that taken into account when I teach them? What motivates students and as a teacher how will I apply the principles of motivation to help students succeed? There is a

strong focus in current editions of educational psychology texts on how to develop a student-centered approach to teaching based on a cognitive/constructivist framework. Often, however, there is little effort to link these principles and theories of educational psychology to the developing inner lives of the preservice teacher. What theories do they identify with and why? How did their development and learning experiences shape their perspectives on teacher-student interactions? How does their personal understanding of their own motivation inform them about their future sense of teacher-efficacy? What seemed to be missing was a discussion of the historical, cultural, economic, and social influences that are brought to bear on decisions regarding appropriate teaching and instructional methods. The distance that needed to be bridged was how to have the preservice teacher understand that their lifetime of personal development would influence the manner in which they interpreted and applied principles of educational psychology with their future students. The bridge to this understanding was to apply to themselves, through self-reflection, the very principles that they were learning to apply to their future teaching.

Theoretical Perspectives

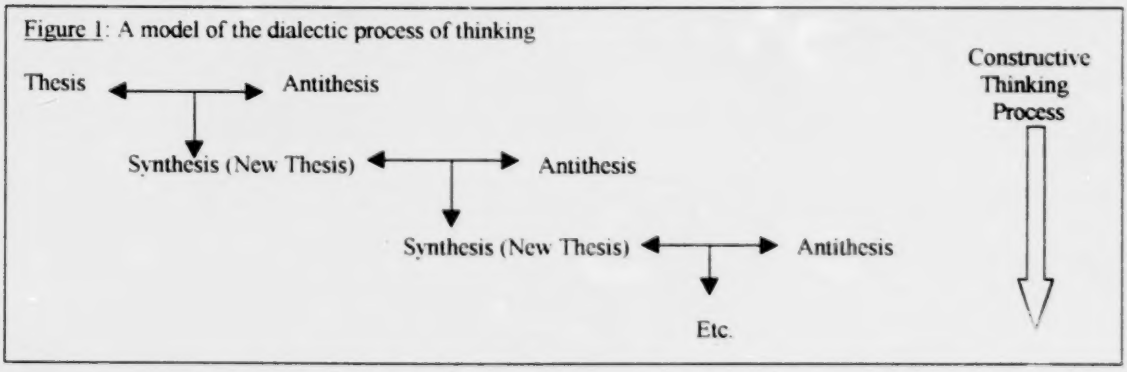
The "personal" distance manifested in the presentation of educational psychology principles in textbooks raised questions about teaching the content of the text without drawing connections to the larger social context in which this content material was created. How does one teach at the micro-level, which focuses on the application of theories at the level of individual students, while also teaching at the macro-level which focuses on the social context in which these theories are currently interpreted? In order to address both levels the course instructor must be able to assist the preservice teachers in identifying their psychological belief systems and the social realities that help shape (and limit) their personal beliefs. The instructor must also provide

a mechanism that enables preservice teachers to acknowledge their belief systems in interpreting and applying principles of psychology to their future careers as teachers.

The theoretical basis for the design of the class was an integration of the dialectic process for understanding educational issues, with a self-reflective approach to the study of educational psychology, based on the sociocultural analysis of development formulated by Bronfenbrenner (1979; 1993) and Vygotsky (1978).

The standard definition of the dialectic is usually traced back to Hegel (Singer, 1983; Houlgate, 1991) and represented as the interaction between the Thesis and Antithesis of ideas leading to Synthesis of a reformulation of the original ideas, with the process continually reproducing itself (see figure 1). This simplified definition captures the essence of the meaning of the dialectic situation as discussed throughout this paper. The dialectic process focuses on the existence of a specific relation of opposition and interaction through which something new emerges, preserving elements of the initial relation while eliminating others. In this sense, it differs from many conventional definitions of critical thinking (Norris, 1992) in that the dialectic seems to provide more opportunity for constructive thinking.

Figure 1: A model of the dialectic process of thinking



Many of the definitions of critical thinking reflect Kant's earlier work with categorical analysis, where objects or ideas are explored in ever-increasing detail, with the original object or idea remaining essentially the same (Goodin & Pettit, 1995). Hegel's dialectic seems more open to the fluid nature of meaning of the original object or idea, allowing for a new meaning or series of meanings. Dialectical thinking is the internalized equivalent of this process; an inner dialogue (cf., Vygotsky) that examines a position in light of its opposing or antithetical position.

The objective of this dialectical thinking is not to prove or disprove a position, but to identify a position with the greatest rational evidence to support it. This objective reflects the logic of Hegel, where nothing is considered self-evident. Hegel asserted that nothing could be understood by itself; meaning or understanding could only be grasped in relation to some other meaning or system of meanings (Houlgate, 1991). What Hegel did was to focus attention upon the process of change, or the relations between and among systems of meaning. By focusing upon the relations among meaning, this paper is concerned with the logic of the underlying processes of change and meaning.

The research conducted by Kitchener (1983) and Kuhn (1991) explores students' epistemological beliefs. Their research indicates that college students view knowledge in terms of a continuum. On one end are the students who sincerely believe that there is a right answer to every question, and this answer is to be provided by the instructor. In the middle of the continuum are students who might be classified as relativists, seeing every position as potentially correct as there are not right answers or criteria for judging right or wrong. In relation to Figure 1, the former group of students would be seen as rigid or dogmatic in their thinking. These students would enter class with a fixed sense of how the world operates and would adopt the position(s) of the instructor, as the instructor was the source of knowledge. The latter group of

students would be more flexible in their thinking and grasp any discrepancies between their ideas and those of the instructor. Yet these students would decide not to pursue a synthesis of these perspectives, as the relative nature of both positions outweighs the potential of finding a synthesis.

At the other end of the continuum are students who would perhaps be labeled as reflective thinkers or evaluative persons. This group acknowledges the possibility that one right answer may not exist, yet there does exist better answers and better criteria for making judgements. These students recognize their original beliefs, understand that they may encounter new material that contradicts their original beliefs, and strive to create a new system of meaning that incorporates both. It is this group that reflects Hegel's logic and truth and represents the dialectic process.

It is at this end of the continuum that this paper focuses and the idea of praxis comes into play. This end of the continuum is viewed as the foundation for the liberation of thought as described by Paulo Freire (1970). Individuals are empowered to take charge of their lives, by recognizing any existing barriers to their development and opening up the exploration of alternatives. These barriers are located in systems of meaning, both of the individuals themselves and others in their cultural milieu.

As these barriers are located in the individual's cultural surroundings, the dialectic process itself must also be contextually bound. The dialectical thinking sought in this endeavor reflects this contextual criterion, as it seeks to identify multiple systems of meaning as discussed by Hegel (Hook, 1962). These multiple systems of meaning could also be categorized as systems of thought, and parallels Bronfenbrenner's (1979) theory of human development.

Bronfenbrenner discusses multiple systems that impact upon human development, from the level of the individual or microsystem to the level of generational epoch or chronosystem.

Again, with the goal of the dialectic to analyze situations in terms of arriving at the greatest rational understanding, each of the levels of Bronfenbrenner's theory can be analyzed not only in terms of each initial category, but also in terms of the relationships between each category. These relationships between Bronfenbrenner's levels are crucial, as they serve to form the larger conceptual framework within which individual belief systems are created. It is not a deterministic mechanism, yet it follows a sociology-of-knowledge approach similar to what Mannheim (1968) proposed.

In this sense, the dialectic would allow individuals, in this case, students, to explore each systems level of their development and also the impact of the relationship among all levels as it affects their development. In other words, students could explore their own systems of meaning, and also address the connection between their systems of meanings and the systems of meaning that make up their surroundings. For example, students might reflect upon their gender and realize that boys don't play with dolls. Yet would the student see the connection to advertisements and marketing strategies for dolls, or how their parents or peers may have contributed to this belief? Is there a larger connection, perhaps to the level of the chronosystem that impacts upon this belief?

An example more readily apparent in an educational psychology class would be the students' beliefs about teacher-centered classrooms. Students would first need to define this concept, then explore this definition in terms of their own prior experiences and also in terms of the information provided in standard educational psychology textbooks. Do these two sources provided the same picture of the concept? Why might a difference exist? This line of

questioning would explore the microlevel of the individual student, yet also larger contexts such as the instructor's perspective on the utility of the text or concept, or of the social conditions in which the text was written.

The work of Marcia (1991) serves as an excellent example, particularly his exploration of identity foreclosure. Discussions of this concept should lead to a compare and contrast session between the perspectives of parents and their children (the students in the class). The instructor should build upon whatever example may be offered by the students, inquiring as to its origins, applicability to the rest of the class, its relation to certain generations and epochs, and so on. Through discussion, students will hopefully begin to realize the connection between their cultural surroundings and their interpretation of events, and how this interpretation may vary with the interpretation of their parents.

This approach is very similar to the work done by Vygotsky (1978). Vygotsky also approached human development from a sociocultural perspective, and focused upon the mediational tools created by a given society to explain human growth and development. These mediational tools include symbols and signs, and both spoken and written language. When these tools are first introduced into one's mental functioning, they form the basis of one's system of meaning. As these tools interact with the environment, the result is not just a simple enhancement of one's existing functions. The result is an actual re-organization of existing mental functions, transforming them into new functions or processes. This is a dialectical process. By analyzing students' written and oral work, development of these mediational tools can be assessed (to some degree), thereby providing some insight into the reflective process so critical for the dialectic.

As the students may not necessarily know their own positions or opinions (and therefore adopt the instructor's) the instructor must create situations in which the students will have the opportunity to consciously explore their own systems of meaning. This is done by using Vygotsky's mediational tools and creating an environment in which the students feel comfortable to express their own thoughts. The focus should remain on the students, fostering student self-reflection through the presentation of oppositional elements. The dialectic thus serves as a heuristic devise to foster acknowledgment of the importance of prior knowledge, so critical to all of the major theories of learning.

Instructional Strategies

The course was designed to have preservice teachers investigate principles of educational psychology through a variety of assignments and activities. All of these activities and assignments helped students to develop a dialectic way of thinking.

As an on-going assignment, the students developed their own philosophies of education. Their first assignment was to create their own ideal classroom. This was to be based upon their own experiences and completed within the first two class periods. Each successive stage of this assignment was reviewed for internal logic and consistency, although none of these assignments were graded. The purpose of this was to create an atmosphere in which the students could express their own ideas without fear of judgement (as represented by grades).

As the semester progressed, the students incorporated the various educational psychology concepts covered in class. These concepts were presented not in stark opposition to the students' stated beliefs, but rather as alternatives to explore. It was left to the students to determine the practical sense or worth of the concept being discussed, after having achieved some degree of understanding of the concept itself. This process involved the instructor posing probing

questions to the students, with the goal of increased student self-reflection. The questions were not evaluative statements, merely thought-provoking statements. For example, an early question asked the students to explore any connection between their own experiences and the concept being examined. Students would be asked repeatedly to define the concepts they utilized, comparing these definitions to the original definition put forth in the text and to definitions arrived at by their peers. These revised concepts would then be examined in light of earlier statements and philosophies of education, with each successive comparison seeking greater internal validity.

The goal was both comprehension of the original concept and integration into students' systems of meaning. Initial comprehension of a concept would often include some degree of opposition to original student ideas, thus providing for the thesis and antithesis segments of the process. Inclusion of elements of the concept into a larger system of meaning represents a synthesis, thus setting the stage for additional constructivist thinking. Even if no sense of opposition is detected, the information is being added to the base knowledge of the student, thereby increasing the scope of the original thesis or system of meaning.

Another instructional strategy employed in the class was that of providing a rationale for the instructor's assignments and behaviors wherever possible. The objective here was to model the reflective process sought by the dialectic. By offering rationales for assignments and choices of topics, the instructor demonstrated a willingness to connect his own experiences with the information found in the text. The instructor elaborated on the process through which educational psychology concepts and principles came to fit into his belief system, and provided an opportunity for discussion of this process. It also demonstrated to the students that not all the information found in the text fit into the instructor's system of meaning.

This was also a very useful tool in terms of avoiding the notion of having to cover all the material found in a text or listed on a syllabus. The idea of 'getting through' all of the material because it is all-important, inhibits the dialectic process, as it focuses attention upon the material itself and not on the students' understanding of the material. The key is to let the students explore each issue, and assure them that it is fine if they all don't necessarily arrive at the same conclusions or perspective. For example, when discussing an article dealing with the US women's soccer team, the class discussion moved from personal experiences of gender casting to covert cultural aspects of gender roles which led to a semi-heated debate. The discussion occupied an entire class period, yet it provided a forum for free-ranging exchange and exploration of individual systems of meaning.

A major instructional strategy used in the course to help students develop dialectic thinking processes in understanding principles of educational psychology was the use of a series of cases focused on classroom dilemmas (viz., Biehler & Snowman, 1997; Silverman, Welty & Lyon, 1996). Cases provide an opportunity for preservice teachers to analyze real and concrete experiences of teachers and to discuss and critique their perspectives and analyses with each other based on each individual's perspective.

The class reads the case, prepares an outline of the case, discusses the case in class, and then writes a detailed analysis of the case. The case outline includes a section covering the perspective of the teacher in the case, a section covering the reader's (i.e., preservice teacher) perspective, and a section relating principles of educational psychology to identified issues in the case and the preservice teacher's ideas regarding potential courses of action for the case teacher.

During the discussion of the case, as well as when providing feedback on the written analysis, the course instructor assists the preservice teachers in clearly separating their

perspectives from those of the case teacher. The object is to reinforce the exploration of the reader's assumptions and beliefs, emphasizing the need to accomplish this prior to (or simultaneously with) assessing the perspective of the case teacher. By having the preservice teachers write down two distinct perspectives, they grow accustomed to considering multiple ways to interpret classroom events. This process is further reinforced through the discussion which includes clarification of how different class members interpret, based on their belief system, the information provided in the case. This is considered in combination with their interpretation of what is important in the case and what educational psychology principles are important to consider for addressing the dilemma(s) of the case.

It is through the class discussions that the dialectic process is engaged as an instructional activity. First, the course instructor takes care to select cases that provide for a wide range of perspectives and analyses. Then, in the discussion of the cases, the course instructor must be well prepared and flexible to allow for deeper exploration of student responses and perspectives. This is necessary to allow different perspectives to emerge, which promotes the dialectic (thesis ⟷ antithesis ⟹ synthesis) and a more complex understanding of how one's previous life history influences one's interpretation of events.

The instructor attempts to balance the desire to steer the discussion to cover key points and principles with the need to allow preservice teachers to have discussions that give them the freedom to express their perspectives without trying to "be right." Since knowledge presented in the cases is flawed and partial at best, what is important is to focus on the process of logical analysis – the dialectic. This does not mean that within a certain context there is never a "best" answer, but the dialectic approach is used to seek the most rationale answer based on the available evidence. The role of the course instructor includes having a firm command of the

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principles of educational psychology to guide the discussion in a dialectic manner so as to draw out research in the field and discuss the implications of these findings for analyzing the case. Thus, the dialectic process is modeled repeatedly during the discussion and analysis of each case.

Students were required to write detailed analyses of three cases throughout the course. The instructor provided written feedback on each analysis that consisted of posing antitheses to the students' theses presented in their analyses. The student then had the opportunity to revise their analyses taking into consideration the antithetical comments provided by the instructor. A sample of these analyses and their revisions were analyzed based on a rating scale that identified increasing levels of reflectivity and dialectical thinking (see Appendix A). The result of this analysis is presented in Table 1. As can be seen, students generally increased the level of reflection and dialectic thinking as they progress from Case 1 to Case 3 during the course. Students who choose to revise their analyses based on the instructor's feedback also generally increased the level of reflection and dialectic thinking from the original to revised analysis.

Table 1: Analysis of levels of reflection and dialectic thinking in written case analyses

	Case 1 M. Lindberg	revision	Case 2 K. Kelly	revision	Case 3 J. Martin	revision
Student 1	5.5	n/a	6	n/a	6.5	n/a
Student 2	6	n/a	6.5	n/a	5.5	n/a
Student 3	6.5	n/a	6.5	n/a	7	n/a
Student 4	5.5	5.5	5.5	5	6	n/a
Student 5	5	5.5	5.5	n/a	5	n/a
Student 6	5.5	5.5	6.5	n/a	6	n/a
Student 7	5	5.5	6.5	n/a	6	n/a
Student 8	6.5	n/a	6	n/a	5	5.5
Student 9	**5.5**	**5.5**	**6**	**6**	6	n/a

Through repeated exposure in the classroom to this dialectic and self-reflective approach to the analysis of cases, general class discussions, and revisions of philosophies, preservice teachers were able to move along the continuum of beliefs discussed by Kitchener (1983) and Kuhn (1991). Many of these college students entered the class at one end of the continuum with the belief that there is a right answer to every question and that answer is the one provided by the instructor. By the end of the course, many of the students had moved to the other end of the continuum and had become more self-reflective and acknowledged the possibility that one right answer may not exist, but there are better answers and better criteria for making judgements. At this end of the continuum the preservice teacher is seen as an active agent in her or his own preparation for teaching. It appears that through the process of reflection and evaluation (using the dialectic), they became more aware of how understanding their own belief systems and the context in which they are developed empowers them to address real problems and the contextual constraints associated with them. It allows them to develop realistic courses of action in the classroom, based on sound principles of educational psychology.

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Appendix A

Rating scale for analyzing levels of reflection and dialectic thinking in written case analyses

Score	Modified Framework (based on Sparks-Langer et al., 1990)	Reflective Writing Criteria (based on Hatton & Smith, 1995)
1	no descriptive language	---
2	simple, lay person description	Descriptive Writing - not reflective - description of events
3	events labeled with terms without justification	Descriptive Writing - no attempt to provide reasons
4	explanation with tradition or personal preference given as the rationale	Descriptive Reflection - reflective, not only a description of events but an attempt to provide reasons
4.5	explanation with principle/ theory given that is irrelevant or unsupported	Descriptive Reflection - see above
5	explanation with appropriate principle/theory given as the rationale	Descriptive Reflection - recognition of alternative viewpoints in the research and literature which are reported
5.5	explanation with both principle/theory and context factors given, but not well connected	Dialogic Reflection - demonstrates a "stepping back" from the events and actions to a different level of mulling about
6	explanation with principle/ theory given in consideration of context factors	Dialectic Reflection - such reflection is analytic or/and integrative of factors and perspectives and may recognize inconsistencies in attempts to provide rationale and critique - includes recognition of one's personal belief system or conceptual framework
6.5	explanation with multiple principles/theories developed in context so that a teaching philosophy is implied	Dialectic/Critical Reflection - demonstrates an awareness that actions and events are not only located and explicable by reference to multiple historical and socio-political contexts
7	explanation with ethical, moral, political, and/or philosophical issues explicitly stated	Critical Reflection - see above

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